Describe the Periodic Table and its importance – 45pts

How to use Periodic Table – 45 pts

No caps and end mark errors – 10 pts

More than a 150 years ago, a russian scientist named Mendel was investigating the 63 physical elements that had been discovered at that time Mendel became convinced that their had to be a certain pattern among these elements. Despite the fact that the many elements varied from rare and valuable solids to strange and deadly gases, Mendel knew there must be a way to group the elements according to their properties.

So Mendel made a notecard for each of the 63 known elements. On the card he listed the atomic mass, density, color, melting point and valence (bonding ability) for each element. He noticed that if all the cards were arranged in order of increasing atomic mass, the valence numbers always appeared in the pattern 1234321. Even more remarkable, Mendel observed that if the cards were arranged in rows of seven, all the elements in each column showed similar properties, and the same valance!

To explain this discovery, Mendel stated that “the properties of the elements are periodic functions of their atomic masses” Used this way, the word period means repeating according to some pattern.”

The period table is an important tool for scientists because a great deal of information about the elements can be gathered very quickly. As you read, refer to your copy of the period table.

Each square on the table refers to one of the 90 known elements. In each square the following information is given: its atomic letter, chemical symbol, name and atomic mass. In addition to the information presented in each square, the elements are also grouped into certain vertical columns (called families) and horizontal rows (called periods), which will provide key information about the element. All of the elements in Family 1A for instance, are silver-white shiny metals. And the pattern of every period will always be the same: a very active solid (such as potassium in Period 4) moving gradually to a very inactive gas (such as krypton in Period 4). By using the periodic table correctly, both scientist and student alike can quickly gather information about all of the worlds’ elements.